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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/668,388	09/25/2000	Kenzo Takeda	P023855-00000	2407

7590 11/23/2004

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EXAMINER

LEE, DOUGLAS S

ART UNIT	PAPER NUMBER
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2125

DATE MAILED: 11/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/668,388

Applicant(s)

TAKEDA ET AL.

Examiner

Douglas S Lee

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 September 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 20000925 **3**
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-17 are rejected under 35 U.S.C. 102(e) as being anticipated by Pourboghraat (US Pat. # 5,508,935).

Regarding claims 1 and 3, Pourboghraat discloses a computer-implemented method of generating a control data for a bending apparatus comprising steps of defining local coordinate systems within an overall coordinate system designed to specify a shape of an elongated product, said local coordinate system representing a stable die of the bending apparatus within the overall coordinate system, respectively (see col. 6, lines 44-56).

Regarding claim 2, Pourboghraat further discloses steps of capturing a shape data specifying the shape of the elongated product in accordance with the overall coordinate system; setting the local coordinate systems on specific cross-sections of the elongated product, respectively, based on the shape data; and determining periodical positions for a movable die of the bending apparatus in accordance with the respective local coordinate systems (see col.2, lines 13-64 and cols. 4-6).

Regarding claim 4, Pourboghraat discloses capturing from a computer-aided design system a shape data specifying a shape of an elongated product (see col.4 line 23), and

generating the control data specifying positions for a movable die of the bending apparatus (see col.6, lines 44-56), said positions set for corresponding feed positions defined in an axial direction of the elongated product (see col. 6, line14).

Regarding claim 5, Pourboghraat discloses method of generating a control data for a bending apparatus comprising determining a geometric position for a movable die of the bending apparatus, based on a shape data specifying a shape of an elongated product; determining a bending moment applied to an elongated product specified in the shape data; determining a quantity for an elastic/plastic bending deformation induced in the elongated workpiece, based on the bending moment; and determining an actual position for the movable die, based on the quantity and the geometric position (see col.5, lines 20-col.11).

Regarding claims 6-8, Pourboghraat discloses method of generating a control data for a bending apparatus comprising determining a geometric position for a movable die of the bending apparatus, based on a shape data specifying a shape of an elongated product; determining a quantity for elbow angle of an elongated workpiece, said elbow angle induced by a shear deformation and a deformation in cross-section of the elongated workpiece at an outlet defined in a stable die of the bending apparatus; and determining an actual position for the movable die, based on the quantity and the geometric position (see cols. 6-7).

Regarding claim 9, Pourboghraat discloses method of generating a control data for a bending apparatus comprising determining a neutral axis based on a shape data specifying a shape of an elongated product, said neutral axis extending in a longitudinal

direction of the elongated product; and determining a feed speed for an elongated workpiece which passes through a stable die of the bending apparatus, based on the neutral axis (see cols. 4-5).

Regarding claim 17, this bending apparatus claim is rejected for the same reasons applied above rejected method claims 1-9.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. Claims 10-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pourboghraat (US Pat. # 5,508,935) in view of Honda Motor Co. LTD (Publication 10314849).

Regarding claims 10-16, the sole difference between these claims and Pourboghraat is whether it can accommodate twisting action on an elongated product. Honda Motor discloses treating bending and twisting on an elongated product. Thus it would be obvious one skill in the computer programming art to modify the computer program code of Pourboghraat with the

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teachings of Honda Motor to accommodate treating bending and twisting on an elongated product.

Conclusion

1. Any inquiry concerning this communication or earlier communications from the examiner should be directed to examiner Douglas Lee, whose telephone number is (571) 272-3745. The examiner can normally be reached on Monday-Friday from 8:00AM- 4:30PM.

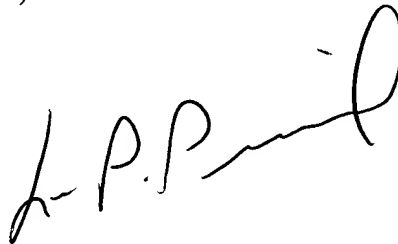
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, *Leo Picard*, can be reached on (571) 272-3745 or via e-mail addressed to [*leo.picard@uspto.gov*]. The fax number for this Group is (703) 872-9306.

Communications via Internet e-mail regarding this application, other than those under 35 U.S.C. 132 or which otherwise require a signature, may be used by the applicant and should be addressed to [*doug.lee@uspto.gov*].

All Internet e-mail communications will be made of record in the application file. PTO employees do not engage in Internet communications where there exists a possibility that sensitive information could be identified or exchanged unless the record includes a properly signed express waiver of the confidentiality requirements of 35 U.S.C. 122. This is more clearly set forth in the Interim Internet Usage Policy published in the Official Gazette of the Patent and Trademark on February 25, 1997 at 1195 OG 89.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 306-5631.

Douglas Lee
11/18/2004



LEO PICARD
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100